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HURRICANE IRMA MANAGEMENT REPORT

Information contained in this report reflects HQ and regional reporting from the most recently completed operational period as well as other reports provided by HQ, regional and interagency sources.

National Incident Management Objectives

- Objective 1: Ensure that health and safety of the EPA response is considered at all times.
- Objective 2: Establish an incident management structure and processes employing the Incident Command System to enable effective overall management of the event with deployment of resources (staff and equipment) in a rapid, aggressive and well-coordinated manner.
- Objective 3: Ensure prompt review and processing of Fuel Waiver requests.
- Objective 4: Prepare for and provide Rapid Assessment of industrial facilities as requested by the States or under EPA's statutory program responsibilities for CERCLA Superfund, RMP and FRP facilities. Working with agencies in affected States, contact industrial sources within the impacted areas to determine their operational status and determine what support can be provided with the monitoring of the start-up of industrial sources along the coastal areas.
- Objective 5: Prepare for and provide Rapid Assessment & Technical Assistance Drinking Water & Wastewater facilities as requested by the State or local government. EPA will support State agencies in contacting drinking water and waste water systems.
- Objective 6: Prepare a Sustained Response Plan that outlines the resource and equipment needs for a long duration response.
- Objective 7: Activate the Agency's Crisis Communication Plan to insure effective and efficient coordination of all incident communications.
- Objective 8: Encourage a collaborative federalism approach, where national state and local governments interact cooperatively and collectively to solve common problems.

Executive Summary

- Irma has now been downgraded to a Category 4 hurricane from a category 5 and will continue to bring wind, storm surge, and rainfall hazards to the Turks and Caicos Islands and the Bahamas through September 9th. Severe hurricane conditions are expected over portions of the Florida peninsula and the Florida Keys beginning the evening of September 9th.
- No major oil spills or threats of releases of hazardous substances or chemicals have been reported.
- All EPA employees in the Caribbean except one have been accounted for; EPA Region 2 Emergency Operation Center (R2EOC) continues to try to establish contact with the employee on St Thomas.
- EPA has sent two on-scene coordinators to Puerto Rico and additional employees are expected to deploy from Edison, NJ on September 8th.
- Irma is likely to make landfall in southern Florida as a category 4 hurricane, and bring storm surge and wind impacts to much of the state.
- The R2 EOC has been activated by FEMA to respond to Hurricane Irma impacting the U.S. Virgin Islands (USVI) and Puerto Rico. EPA is part of Emergency Support Function 10 (ESF10) and currently has two FEMA Mission Assignments (MA) for pre-deployment planning and implementation. The MAs apply to responses to St. Thomas, St. Croix and St. John in the U.S. Virgin Islands, and Puerto Rico, including the islands of Vieques and Culebra.
- R4 has developed a list of regulated facilities and sites of potential concern which are being refined further based on Irma's path, storm surge, and 100/500-year flood map predictions.
- EPA HQ issued a press release on September 7th to announce that Regions 2 and 4 are continuing preparations for Hurricane Irma and have activated emergency response teams.
- The Puerto Rico Emergency Operations Center and Virgin Islands Territorial Emergency Management Agency are at full activation. The Governors of Florida, South Carolina, Georgia (6 counties), U.S. Virgin Islands and Puerto Rico have declared states of emergency. The Puerto Rico National Guard and U.S. Virgin Islands National Guard have been activated.
- The FEMA National Response Coordination Center (NRCC) remains at Level I (24/7 operations), Full ESFs and Liaison Officers (LNO) in response to Hurricane Irma.



The map displays the Caribbean Sea and surrounding landmasses, including the United States, Mexico, Central America, and the Caribbean islands. Latitude lines are marked at 20N, 25N, 30N, and 35N. Longitude lines are marked at 100W, 95W, 90W, 85W, 80W, 75W, 70W, and 65W. State abbreviations for the United States (KS, MO, OK, AR, TX, LA, MS, AL, GA, SC, NC, VA, DE, NJ) and Mexico are shown. The projected path of Tropical Storm Frances is indicated by a line with markers for different times: 8 AM Sun, 8 PM Sat, 8 AM Sat, 8 AM Mon, 8 AM Tue, and 8 AM Wed. A shaded area represents the storm's potential impact region. The map also shows the locations of the Bahamas, Haiti, Dominican Republic, and Puerto Rico.

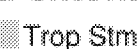
Forecast positions:

● Tropical Cyclone ○ Post/Potential TC

Sustained winds: D < 39 mph

S 39-73 mph H 74-110 mph M > 110 mph

Current wind extent:



Region 2 Significant Activities:

- R2 staff is tracking Hurricane Irma, which made landfall in Puerto Rico (PR) and the US Virgin Islands.
- The R2 REOC is activated with an Incident Command System (ICS) structure in place. R2 has activated the Regional Incident Coordination Team (RICT).
- R2 is coordinating closely with the EPA Caribbean Environmental Protection Division (CEPD). The REOC has shipped two satellite phones to CEPD in San Juan. The REOC is devising a staffing plan for after-hours response to cover for OSCs deployed to Region 6 (R6) for Hurricane Harvey.
- R2 generated a complete list of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Oil Pollution Act (OPA) sites to prioritize post hurricane visits. Additionally, R2 created a list of other regulated facilities in order to conduct pre and post storm facility coordination and assessment.
- R2 initial assessment teams are ready to deploy to PR and USVI once a request for assistance and the Mission Assignment is available. Teams will focus on assessing any immediate threats from hazardous substance releases and oil spills, orphan hazardous containers, household hazardous waste, contaminated debris, and drinking water/wastewater (DW/WW) issues. EPA will also be following up on the conditions at our Superfund NPL and removal sites, oil sites, and regulated facilities.
- FEMA issued a Mission Assignment (MA) to EPA for the staffing of the ESF 10 desk at the Regional Response Coordination Center (RRCC). EPA has stationed personnel at the FEMA R2 RRCC at the Naval Station Earle. As of September 7th, a third MA has been issued to R2 for \$75,000 to maintain REOC ops through September 13th. The Governor of USVI has declared a disaster and has requested emergency funding from FEMA. MAs are listed below. The Governor of PR has not yet initiated a request for a major disaster declaration. R2 will continue to pursue the approval of the MA for assessment work in PR that is still in the queue for funding under the emergency declaration. ESF10 desk continues to work with FEMA on processing of Mission Assignments for RRCC/Joint Field Office/EPA EOC staffing, and environmental assessments, for both USVI and PR, under the September 7th Emergency Declarations.

Impacts to Puerto Rico:

- The governor of Puerto Rico has a planned call with the EPA Administrator on September 8th.
- Emergency Management Agency (PREMA) activated to full activation.
- The Governor of Puerto Rico declared States of Emergency and activated the National Guard.
- Air: San Juan Airport is open for all operations.
- Ports: Guayama open only to tugs and barges; Mayaguez open in daylight only; Culebra and Arecibo are closed.
- Public Transit System: Service suspended: Puerto Rico Highway & Transportation Authority; Autoridad de Transporte Integrado; Maritime Transportation Authority (ferry service).

- Public schools will remain closed until further notice.
- 341,514 clients (27.24%) without potable water service of which 280,845 are due to electrical power failure.
- 998,796 clients (64%) without electrical power service.
- 14 Hospitals have lost electrical power; 4 of them are Public Property (all have generators providing the energy need). Public Property Hospitals are: Cardiovascular, Centro Medico, San Juan Municipal Hospital and Federico Trilla.
- Hospitals still using emergency generators (52%); 4 of them are Public Property.
- US DHHS Secretary declared a state of health emergency for PR and the USVI.
- 42% of hospitals functioning without generators. Local hospitals will provide support to the USVI as their hospital facilities have been
- As of 08:00 hrs., approximately 246,000 people from Puerto Rico Aqueduct and Sewer Authority (PRASA) systems are without water. PRASA serves about 96% of PR.
- Sections of La Perla and Barrio Obrerowards in the Municipality of San Juan are under mandatory evacuation.
- The R2 San Juan office is operating on generator power and water supply from a building cistern. Phone, IT and security systems are operational, but the office will remain closed until September 11th.

Impacts to U.S. Virgin Islands

- St. John Emergency Operations Center (EOC) destroyed.
- Majority of private, government buildings, schools, gas stations are completely destroyed, or roofs removed, or flooded
- U.S. Virgin Islands: 6 shelters and 298 shelter occupants
- Complete evacuation of 45 patients from the Schneider Medical Center St. Thomas Facilities via rotary wing.
- St. John and St. Thomas have received devastating damage. The Governor has requested a disaster declaration. There are impacts to infrastructure with building damage reported. Airports remain closed. Communications with both islands is problematic.
- Department of Transportation (DOT) reports that the St. Croix airport is now open. Initial reports are no significant damage at the site. Curfew remains in effect.
- Ports: Christiansted, St. Croix open daylight only; Closed: St. Thomas (all); Cruz Bay, St. John; Fredericksted, St. Croix
- The USVI Water and Power Authority (WAPA), and territorial Law Enforcement (LE)/communications partners advised St. Thomas/St. John obtained a “complete” power/communications collapse. Everyone is running off of generators.
- The Roy L. Schneider Hospital, St. Thomas sustained significant damage to their roof and structure. They are looking to evacuate 99 patients from the facility September 8th, either to PR or CONUS. Additional details can’t be confirmed until later in the morning when DoD/USCG assets are on ground/water.
- The Virgin Islands Territorial Emergency Management Agency (VITEMA), St. John was destroyed and no longer standing.
- FEMA Coordinator advised that one of the two hurricane shelters on St. Thomas was evacuated last night due to structural damage and flooding. The shelter was evacuated, and no casualties were determined at this time.

- Significant damage has been reported from the two northernmost islands of the United States Virgin Islands (USVI), including four deaths reported on St. Thomas. The USVI government is operating out of St. Croix.
- Two-thirds of Puerto Rico's population have lost power, and one-third of the population have lost water service.
- There are no lines of communication currently with the USVI.

Superfund and Oil Sites: EPA has identified and conducted initial assessments at 23 Superfund and oil sites in PR and USVI. In advance of Irma, R2 has contacted all the responsible entities with regard to preparing for the storm. Post Irma, R2 have started to reach out to all the responsible entities for NPL sites, active removal actions and oil response actions, with regard to assessing impacts to the site.

An On Scene Coordinator (OSC) has conducted assessments of two active Superfund sites:

- Arecibo Battery, Muni. Arecibo--The site is undamaged, although power is out in the entire area. Security service is on duty and removal ops will resume on September 8th, on generator power until PREPA restores power.
- Corozal Battery, Muni. Corozal--Drinking water filtration system for community is not operational due to power outage. Condition of DW well and well-heads are unknown at the time of this report. The Region 2 OSC is looking at options to restore pumping DW through activated carbon filtration system.
- No significant damage reported at former Hovensa refinery and Limetree Oil Terminal on St. Croix.

| Superfund Site Name | State | County | Status |
|-------------------------------------|--------------|---------------|---------------|
| Cruz Bay Oil Tank | USVI | St. Johns | Oil Response |
| Crum Bay Oil Spill at WAPA Facility | USVI | St. Thomas | Oil Response |
| Guayanilla Bay Oil Spill | PR | Guayanilla | Oil Response |
| Puma Caribe (CAPECO) | PR | Bayamon | Oil Response |
| TUTU Well Field | USVI | St. Thomas | NPL |
| Pesticide Warehouse 1 | PR | Arecibo | NPL |
| The Battery Recycling Corp. | PR | Arecibo | Removal & NPL |
| Upjohn Facility | PR | Barceloneta | NPL |
| Cabo Rojo Groundwater | PR | Cabo Rojo | NPL |
| Hormigas Groundwater | PR | Caguas | NPL |
| Cidra Groundwater | PR | Cidra | NPL |
| Corozal Groundwater | PR | Corozal | Removal & NPL |
| Dorado Groundwater | PR | Dorado | NPL |
| Fibers Public Supply Wells | PR | Jobos | NPL |

| Superfund Site Name | State | County | Status |
|--------------------------------|-------|------------------|--------|
| Juncos Landfill | PR | Jucos | NPL |
| Pesticide Warehouse III | PR | Manati | NPL |
| Maunabo Urbano Public Wells | PR | Maunabo | NPL |
| Scorpio Recycling | PR | Cabdela Ria Ward | NPL |
| Vega Baja Solid Waste Disposal | PR | Vega Baja | NPL |
| San German Groundwater | PR | San German | NPL |
| Papelera Puertoriquena, Inc. | PR | Utuado | NPL |
| Vega Alta Public Supply Wells | PR | Vega Alta | NPL |
| Atlantic Fleet Weapons | PR | Vieques | NPL |

Regulated Facilities:

Preliminary reports from a few regulated entities in PR have reported no damage. Instances of regulated facilities that suffer damage will be added to the Flex Viewer and prioritized for subsequent ground assessment. At present OPS is working with the Regulated Facility Assessment Coordinator to prioritize and map facility assessment inspections. A list of high risk facilities has been compiled and is posted on the R2 IRMA website at response.epa.gov.

Drinking Water / Waste Water (DW/WW) Assessments:

EPA continues to coordinate with PR and USVI concerning drinking water and waste water systems.

Environmental Unit:

R2 Environmental Unit Leader (EUL) in conjunction with an EUL from the R1 National Incident Management Team have been reviewing Quality Assurance Project Plans (QAPPs) used in the Hurricane/Superstorm Sandy Response. The EUL has updated the QAPPs for Soil/Sediment Sampling and Debris Burning and will be reviewing/updating QAPPs for Surface Water, Drinking Water and Air Monitoring/Sampling. EUL has also been tasked with going through Risk Management Plan (RMP) Facilities, Facility Response Plan (FRP) Facilities and Spill Prevention, Control and Countermeasure (SPCC) Facilities in PR and the USVI to prioritize possible releases.

Region 4 (R4) Significant Activities:

- The REOC is activated at Level 3.
- The REOC has coordinated with FL, GA, SC, and NC concerning their readiness status.
- The REOC is compiling EPA regulated facility (RMP, FRP, CERCLA, DW/WW) data in preparation for potential assessments throughout Hurricane Irma's path.

- EPA Liaison staffing Emergency Support Function (ESF)-10 desk at FEMA Regional Response Coordination Center (RRCC) under Mission Assignment (MA) for Federal Operational Support (FOS).

Superfund and Oil Sites:

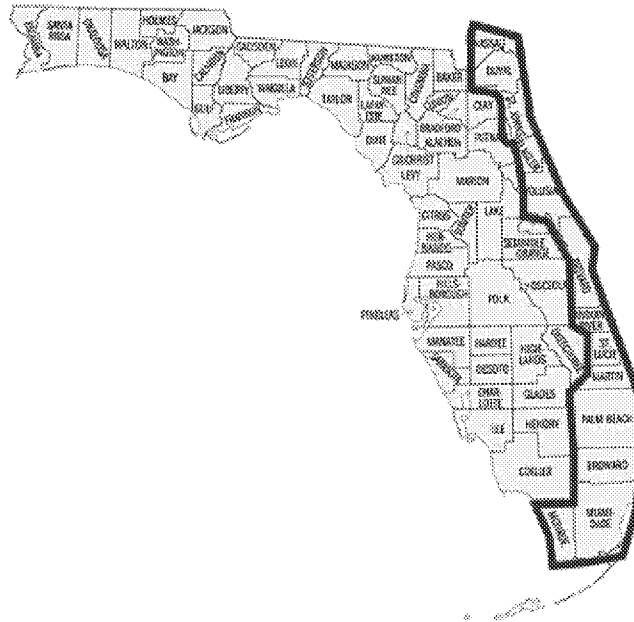
EPA has identified approximately 22 current or former National Priorities List (NPL) sites within Florida's southernmost 100 miles. In advance of Irma, R4 is working with the responsible entities with regard to preparing for the storm.

Drinking Water / Waste Water (DW/WW) Assessments:

- EPA, R4 spoke with Florida Department of Environmental Protection (FDEP) on September 6, to discuss water-sector response capabilities and reporting expectations for water infrastructure status. FDEP will be using a database called Storm Tracker to track and report on water and wastewater system status, and EPA has access to this tool. There is no current request for water-sector assistance.
- Contact has been made with the Seminole and Miccosukee Tribes in South Florida and EPA drinking water support and response capabilities were discussed.
- R4 is scheduling calls with drinking water program in Georgia, South Carolina and North Carolina to ensure we have current contact information for emergency situations and have a mutual understanding of our respective organization's water sector response capabilities. Preparations are underway for water staff to deploy if, and when, the requests for assistance from the states and/or tribes are received.

Impacts to Florida:

- Mandatory evacuations have been placed for the Florida Keys and South Florida.
- Florida has issued a state of emergency in all 67 counties within the state of Florida.
- The image below highlights Florida Coastal Counties where potential facilities and sites have been prioritized by REOC for potential follow-up (see Table 1).



| Regulated Entities in Projected Affected Area | | | |
|---|-----|-----|-----|
| WWTP | NPL | RMP | FRP |
| 51 | 38 | 92 | 57 |

WWTP – Wastewater Treatment Plant
NPL – National Priority List Sites

FRP – Facility Response Plan sites
RMP – Risk Management Plan sites

FEMA and State Emergency Operations Center (SEOC) Activation Updates:

- On September 5th, FEMA R4 activated the RRCC and an EPA R4 OSC staffed the ESF-10 desk. FEMA R4 RRCC is at activation level 2. EPA will continue to staff the ESF-10 desk during regular business hours. R4 received a Mission Assignment to support ESF-10 activities in the RRCC.
- The FL state EOC (SEOC) is under Level 1 activation and R4 has mobilized an OSC to staff the SEOC on September 8th. EPA and FDEP are compiling a list of RMP, FRP, CERCLA and other regulated facilities of interest that may require an assessment due to being in Irma's impact area.
- The GA SEOC is currently operating at a Level 2 (elevated) activation.
- The NC SEOC is currently operating at a Level 4 activation.

- The SC SEOC is at OPCON IV (Monitoring) and TN is at Level IV (Monitoring). The EOC for the PR is at Level IV (full activation) and USVI is at Level II (full activation).

Regional Personnel

| Type | R2 Personnel | R4 Personnel | Total Regional Personnel |
|-------------|--------------|--------------|--------------------------|
| EPA | 38 | 13 | 51 |
| Contractors | 5 | 2 | 7 |
| Totals | 43 | 15 | 58 |

Regional Mission Assignments and Funding

| Mission Assignment Number | Funding Amount | Description of Assignment |
|---------------------------|---------------------|---|
| VI-17090102-EPA-01 | \$20,000 | To support of the FEMA's RRCC in Colts Neck, NJ to support FEMA response ops |
| PR3384EMEPA01 | \$75,000 | Activate EPA to FEMA R2 RRCC, EPA REOC, State EOC, JFO, PDA, and RNA Teams and other coordination venues to support FEMA response ops in PR |
| FL-17083101-EPA-01 | \$10,000.00 | Federal Operations Support |
| Total Funds | \$105,000.00 | |

EPA Headquarters Significant Activities:

The HQ EOC is activated to Level 1 in support of the R2 and R4 responses to Hurricane Irma. The HQ EOC is coordinating on several levels with R2, R4, and other Federal agencies. The HQ EOC has deployed personnel to the FEMA NRCC to staff the ESF #10 desk. EPA Senior Management that comprise the Policy Coordination Committee (PCC) developed and issued senior management objectives that form the basis of field strategy and tactics in response to Irma.

Number of HQ Personnel Involved in the EOC:

| Personnel | AO | OAR | OCFO | OCSP | OECA | OEI | OGC | OLEM | OP | ORD | OW | R3 | ATSDR | Totals |
|--------------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|-----------|
| Employees | 1 | 3 | 0 | 2 | 2 | 1 | 1 | 13 | 1 | 2 | 1 | 0 | 1 | 28 |
| Contractors | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 6 |
| TOTAL | 1 | 3 | 0 | 2 | 2 | 4 | 1 | 16 | 1 | 2 | 1 | 0 | 1 | 34 |

National Incident Management Team (N-IMAT):

EPA activated the N-IMAT (highly skilled response personnel from Regions 1 and 2) to advise and assist R2 with response activities. The N-IMAT team deployed five personnel to advise and assist R2's REOC in Edison, NJ to support their response to Hurricane Irma.

EPA Laboratory/Analytical Services:

R2 and R4 held planning discussions but no field operations.

Air Monitoring:

R2 and R4 held planning discussions but no field operations.

Drinking Water/Wastewater Assessments:

R2 and R4 held planning discussions but no field operations.

Other EPA Activities

Fuel Waivers:

| Affected State | Waiver Request | Date Received | Status Talking Point | Waiver Response |
|--|----------------|---------------|--|---|
| Reid Vapor Pressure and Reformulated Gasoline Requirement Waivers | | | | |
| AL, AR, CT, DC, DE, FL, GA, IA, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NE, NH, NJ, NM, NY, OH, OK, PA, RI, SC, SD, TN, TX, VA, VT, WI, WV | None - exempt | N/A | On Sep 7, EPA issued a waiver of the federal requirements for low volatility “summertime” gasoline requirements in all east coast states located in PADD 1, all Midwestern states located in PADD 2, and all Gulf coast states located in PADD 3. In addition, EPA waived the Reformulated Gasoline (RFG) requirements in these same states. This waiver supersedes the August 31 waiver of the gasoline requirements for PADDs 1-3. | https://www.epa.gov/sites/production/files/2017-09/documents/multi-statefuelwaiver090717.pdf |
| US territories (Puerto Rico / U.S. Virgin Islands) | None - Exempt | N/A | The Clean Air Act exempts U.S. territories from low RVP requirements. Therefore, there is no requirement to waive in the event of a fuel supply disruption. | N/A |
| Dyed NRLM Diesel Fuel Waiver | | | | |

| Affected State | Waiver Request | Date Received | Status Talking Point | Waiver Response |
|----------------|--|---------------|--------------------------------|---|
| Florida | Florida Department of Environmental Protection requests use of 15 parts per million sulfur non-road diesel to be used as highway diesel fuel, waiving red dye requirements | 9/6/17 | Granted 9/6/17 through 9/22/17 | https://www.epa.gov/enforcement/florida-fuels-waivers |

***PADD: Petroleum Administration for Defense Districts**

Communications:

- EPA pushed a Bloomberg article out highlighting the importance of securing Superfund sites and EPA's response personnel on the ground in TX and FL as well as PR and USVI.
- EOC PIO is working on translating 10 Fact Sheets, focused on general hurricane response, into Spanish and Vietnamese. These materials are planned to be posted to the hurricane response website on EPA.gov by September 8th.